APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/583,645	05/07/2007	Jens Kleinfeld	3778	3553

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EXAMINER
ROCHE, JOHN B

ART UNIT	PAPER NUMBER
2184	

NOTIFICATION DATE	DELIVERY MODE
11/13/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

striker@strikerlaw.com

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>01 July 2009</u>.

2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-10</u> is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-10</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a) ☒ All   b) ☐ Some * c) ☐ None of:

        1. ☒ Certified copies of the priority documents have been received.

        2. ☐ Certified copies of the priority documents have been received in Application No. _____.

        3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)   4) ☐ Interview Summary (PTO-413)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)   Paper No(s)/Mail Date. _____.
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)   5) ☐ Notice of Informal Patent Application
     Paper No(s)/Mail Date _____.   6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which

forms the basis for all obviousness rejections set forth in this

Office action:

> (a) A patent may not be obtained though the invention is not identically
> disclosed or described as set forth in section 102 of this title, if the
> differences between the subject matter sought to be patented and the prior
> art are such that the subject matter as a whole would have been obvious at
> the time the invention was made to a person having ordinary skill in the
> art to which said subject matter pertains. Patentability shall not be
> negatived by the manner in which the invention was made.

2.   Claims 1-10 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Hohner et al. (US 5,437,044), hereafter

referred to as Hohner'044 in view of Frenzel et al. (DE3440917),

hereafter referred to as Frenzel'917.

3.   Referring to claim 1, Hohner'044 teaches a memory—

programmable control, aka SPS (stored program control 10 as seen

in figure 1 and column 3, lines 39-40) for coupling to a data

interface of a personal computer (programming device 19 as seen

in figure 1 and column 4, line 7), having means for operating

the inputs and outputs of the SPS, the means including keys for

tripping machine functions (operating unit 12 as seen in figure

1 and column 3, line 52; keypad 13 as seen in figure 1 and

column 3, line 53), characterized in that the keys are embodied

as pushbuttons (keypad 13 as seen in figure 1 and column 3, line
53) which are provided in addition to the conventional user
surface of the PC and which are each electrically connected
directly to one of the SPS inputs (multi-pole plug 15 as seen in
figure 1 and column 3, lines 55-56); from the conventional user
surface of the PC, one of a plurality of key levels, each with
selected meanings, stored in memory in the PC, for the
pushbuttons is selectable (programming device 19 can modify the
program of control device 10 as seen in figure 1 and column 4,
lines 16-19; program control takes place using program in memory
of device 19 as seen in figure 1 and column 4, lines 19-21); and
in the SPS, a data-processing control unit, connected to the SPS
inputs, is provided (microcomputer within SPC 10 as seen in
figure 1 and column 3, lines 45-47), which from the PC via the
data interface receives the information about the key allocation
of the pushbuttons in the particular key level selected () and
links this information with a pushbutton applied to an SPS unit
(coordination of functions of keyboard 23 for key functions of
keypad 13 as seen in figure 1 and column 4, lines 59-61).

Hohner'044 does not appear to explicitly teach the keys
being electrically connected directly to one of the SPS inputs
at the same time that the personal computer is coupled to the
SPS.

However, Frenzel'917 teaches the keys (digital keypad 28 as
seen in the cover figure) being electrically connected directly
(input/output line 25 as seen in the cover picture) to one of
the SPS inputs (input/output 7 on central processing unit 3 as
seen in the cover picture) at the same time that the personal
computer (programming unit 12 as seen in the cover picture) is
coupled to the SPS (input 5 and plug-in connection 13 connecting
programming unit 12 to central processing unit 3 as seen in the
cover picture).

Hohner'044 is analogous to Frenzel'917 because they are
both drawn to the same field of invention of programmable memory
control devices.

At the time of the invention, it would have been obvious to
one of ordinary skill in the art, having the teachings of
Hohner'044 and Frenzel'917 before him or her, to modify the
memory-programmable control of Hohner'044 to include the
simultaneous connection of the keys and the PC to the SPS of
Frenzel'917 because the connection of both a computer and a set
of keys could be done in a pass-through approach, as in some
printer models; therefore, this would be a common practice in
the art.

The motivation to combine these teachings would have been
to construct a control device that is suitable for processing

alphanumeric information but which at the same time can be
operated simply, conveniently and without programming knowledge
(abstract, lines 17-19).

    Therefore, it would have been obvious to combine the
teachings of Frenzel'917 with those of Hohner'044 to bring about
the invention described in the claim as shown above.

4.   As to claim 2, Hohner'044 teaches the device as defined by
claim 1, characterized in that the pushbuttons are each
connected, parallel to the SPS inputs, to an internal bus of the
PC, so that by means of a respective pushbutton, surface
functions of the PC that are stored in memory in the PC and are
simultaneously assigned to machine functions and to the key
allocation can each be tripped (coordination of functions of
keyboard 23 for key functions of keypad 13 as seen in figure 1
and column 4, lines 59-61).

5.   As to claim 3, Hohner'044 teaches the device as defined by
claim 2, characterized in that in the PC, a data processing
first control unit, connected to the pushbuttons, is provided
(control unit in computer housing 22 as seen in figure 1 and
column 4, lines 8-9), which receives the information about the
surface buttons assigned to the pushbuttons (program in control

device 10 is read into programming device 19 as seen in figure 1

and column 4, lines 16-18) and links it with a pushbutton

signal, applied by the internal bus, to make a starting signal

for the surface functions assigned to that pushbutton

(coordination of functions of keyboard 23 for key functions of

keypad 13 as seen in figure 1 and column 4, lines 59-61).

6.   As to claim 4, Hohner'044 teaches the device as defined by

claim 1, characterized in that in the PC, a data-processing

second control unit is provided, which is connected to a screen

of the PC and which receives the information about a key label

(video controller is necessary to transfer information to the

screen of a PC), corresponding to the key allocation, so that

the key allocation of the particular key level selected can be

displayed on the screen of the PC by means of a key label (cause

a key on a screen to change upon actuation of a physical key,

column 5, lines 10-15).

7.   As to claim 5, Hohner'044 teaches the device as defined by

claim 4, characterized in that the second PC control unit

receives status information about the pushbuttons from the SPS

control unit via the data interface (representation of the

operating unit 12, including keypad 13, is shown on picture

screen 20 as seen in figure 1 and column 4, lines 55-57), and
that the visual display of the key label of the individual
pushbuttons is dependent on the status information about the
individual pushbuttons (cause a key on a screen to change upon
actuation of a physical key, column 5, lines 10-15).

8.   As to claim 6, Hohner'044 teaches the device as defined by
claim 4, characterized in that the pushbuttons are located in
the vicinity of the screen of the PC in such a way that a direct
relationship with the key label and/or pushbutton status
information on the screen can be established by the user of the
device (representation of the operating unit 12, including
keypad 13, is shown on picture screen 20 as seen in figure 1 and
column 4, lines 55-57; cause a key on a screen to change upon
actuation of a physical key, column 5, lines 10-15).

9.   As to claim 7, Hohner'044 teaches the device as defined by
claim 4, characterized in that the software in the PC is
embodied such that the key label can be displayed in reserved
areas of the screen that are not coverable by other display
functions (cause a key on a screen to change upon actuation of a
physical key, column 5, lines 10-15).

10. As to claim 8, a central memory unit is inherent to the
functionality of a PC.

     Hohner'044 and Frenzel'917 do not appear to explicitly
teach the device as defined by claim 1, characterized in that in
the PC, for each selectable key level one data matrix is stored,
in which matrix each of the pushbuttons is assigned a data line
containing information that is allocated in columns to different
purposes.

     While Hohner'044 does teach the storage of data pertaining
to the pushbuttons (programming device 19 reloads modified
program to memory of the control device 10 as seen in figure 1
and column 4, lines 19-23; coordination of functions of keyboard
23 for key functions of keypad 13 as seen in figure 1 and column
4, lines 59-61), the use of a data matrix for each selectable
key level, in which matrix each of the pushbuttons is assigned a
data line containing information that is allocated in columns to
different purposes, is an alternative arrangement of the art.

     At the time of invention, it would have been obvious to one
of ordinary skill in the art, having the teachings of Hohner'044
and Frenzel'917 before him or her, to incorporate the device as
defined by claim 1, characterized in that in the PC, for each
selectable key level one data matrix is stored, in which matrix
each of the pushbuttons is assigned a data line containing

information that is allocated in columns to different purposes
because the use of a data matrix in memory is a common practice
in the art.

The motivation to combine these teachings would have been
to facilitate linking the functionality of the controller with
the computer keys (coordination of functions of keyboard 23 for
key functions of keypad 13 as seen in figure 1 and column 4,
lines 59-61).

Therefore, it would have been obvious to modify the
teachings of Hohner'044 and Frenzel'917 to bring about the
invention as claimed above.

11. As to claim 9, Hohner'044 teaches the device as defined by
claim 8, characterized in that in the PC, a central control
element for level control is provided, which acts as a data
shunt between the central memory unit, the first PC control unit
embodied as a function assignment, the second PC control unit
embodied as a key display, and the SPS control unit embodied as
a flag assignment (CPU on a front-side bus linking components is
inherent in a computer).

12. As to claim 10, Hohner'044 teaches the device as defined by
claim 9, characterized in that in the data matrix, each

pushbutton has one SPS function flag, corresponding to the
allocation of the pushbutton in the selected key level
(operating functions in keypad 13 as seen in figure 1 and column
3, lines 37-39), one SPS feedback flag (actuation of key
activates corresponding function, column 5, lines 16-19), one
piece of label information (appearance of corresponding key,
column 4, lines 11-15), and one PC function identification,
assigned to the allocation of the pushbutton, of the surface
function (operating function imparted to each key on the keypad,
column 2, lines 13-16); and the first PC control unit for
function assignment receives the information on PC function
identification (keys on keyboard given operating functions,
column 2, lines 32-34), the second PC control unit for key
display receives the information on labeling (appearance of
corresponding key, column 4, lines 11-15), and the SPS control
unit for flag assignment receives the information on SPS
function flags and SPS feedback flags via the control element
level control from the central memory unit (programming device
19 reloads modified program to memory of the control device 10
as seen in figure 1 and column 4, lines 19-23).

                         Response to Arguments

13. Applicant's arguments with respect to claims 1-10 have been
considered but are moot in view of the new ground(s) of
rejection.

Referring to claim 1, Applicant argues that in light of the
amendment to the claim stating that both the keys on the
operating means for operating the inputs and outputs of the SPS
and the personal computer are coupled to the SPS at the same
time, the rejections under section 102 and section 103 are
invalid.

Examiner submits that these issues are ultimately moot in
light of the incorporation of Frenzel'917 into the matter of the
rejection of claim 1 under 35 U.S.C. 103.

Conclusion

14. Applicant's amendment necessitated the new ground(s) of
rejection presented in this Office action. Accordingly, **THIS
ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is
reminded of the extension of time policy as set forth in 37
CFR 1.136(a).

A shortened statutory period for reply to this final action
is set to expire THREE MONTHS from the mailing date of this
action. In the event a first reply is filed within TWO MONTHS
of the mailing date of this final action and the advisory action

is not mailed until after the end of the THREE-MONTH shortened

statutory period, then the shortened statutory period will

expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated

from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than

SIX MONTHS from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier

communications from the examiner should be directed to JOHN B.

ROCHE whose telephone number is (571)270-1721. The examiner can

normally be reached on 8:30 am - 5:00 pm, M-F EST.

If attempts to reach the examiner by telephone are

unsuccessful, the examiner's supervisor, Henry Tsai can be

reached on 571-272-4176. The fax phone number for the

organization where this application or proceeding is assigned is

571-273-8300.

Information regarding the status of an application may be
obtained from the Patent Application Information Retrieval
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access to the automated information system, call 800-786-9199
(IN USA OR CANADA) or 571-272-1000.

JR

/Henry W.H. Tsai/
Supervisory Patent Examiner, Art Unit 2184